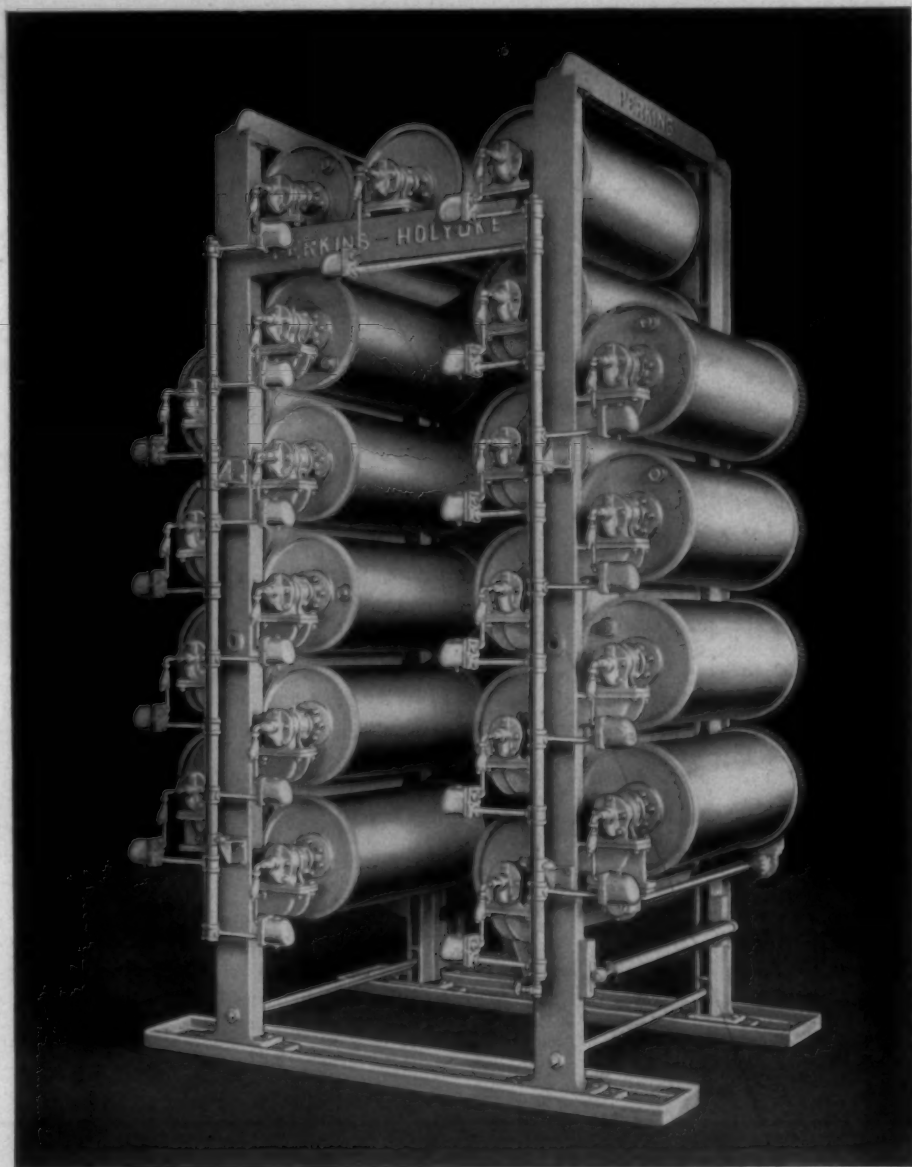


TEXTILE BULLETIN

Vol. 49

FEBRUARY 13, 1936

No. 24



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March 5, 1936

The period 1911 to 1936 witnessed the ascendancy of the South to a position as the leading cotton manufacturing section of the United States.

Textile Bulletin's Silver Anniversary Number will present an interesting record of this remarkable growth along with a review of the important developments and improvements that have been made in textile manufacturing during this time.

From an editorial standpoint this Number will be an outstanding achievement in textile journalism. In point of size it will be the largest single issue we have ever published.

A majority of the nation's leading textile machinery and supply manufacturers have already reserved space, and in addition to these, scores of well known Southern mills will be represented, among the latter being: Riverside & Dan River Cotton Mills, Exposition Cotton Mills, Pepperell Mfg. Co., Republic Cotton Mills, Union Bleachery, Newberry Cotton Mills, Erwin Cotton Mills, Georgia-Kincaid Mills, and many others.

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Japanese Imports Increased 400% Last Year

Need of Protection Is Clearly Shown

Imports "for consumption" of cotton piece goods from Japan during 1935 increased 400 per cent over the total of such imports in 1934 or from 7,286,517 square yards in 1934 to 36,472,234 square yards in 1935, according to a Cotton-Textile Institute analysis of reports issued by the Department of Commerce.

"The analysis," said Dr. Claudius T. Murchison, president of the Institute, "emphasizes the importance of the re-enactment, as proposed by Senator James F. Byrnes, in substitute farm relief legislation, of Section 22 of the former AAA. The latter section, re-enacted, would permit the President to protect domestic producers by the application of quotas to limit imports of agricultural commodities or manufactures from foreign low-cost countries.

"The significance of the 1935 record lies in the fact that while the total of imported Japanese cotton goods is only fractional in relation to the total domestic production, the impact falls almost wholly on a single division of the industry. Of the 36,472,234 square yards of all types of cotton piece goods imported from Japan, 30,039,189 square yards were bleached cloths and represented slightly more than 20 per cent of the average annual United States production of that type of goods.

"Such a concentration in a particular field emphasizes the urgent need of the cotton industry for protection. True, the State Department in December was advised by the Japanese Ambassador that Japanese cotton manufacturers had agreed to restrict voluntarily their shipments to the United States.

"But, as was pointed out at the time, that declaration of policy is unsatisfactory in at least two respects—it is not specific either as to duration or as to types of goods on which the Japanese will impose their own restrictions.

"The tremendous disparity between labor costs here and in Japan render existing tariff rates ineffective as protection for the American industry in its domestic market. An increase in the tariff rates sufficient to give adequate protection against Japanese cotton goods would be prohibitive against other countries.

"The problem might be solved by negotiation of a trade treaty with Japan, but there is no reason for Japan to enter into such an arrangement when they can undersell Americans cottons here and in export trade.

"We have no retaliatory weapon and our only effective defense appears to be in a quota system which will give adequate protection to individual types of American cotton goods.

"The Commerce Department reports also show that during 1935 the entries of Japanese cotton piece goods to bonded customs warehouses, supposedly for re-export, exceeded withdrawals from warehouses by approximately 12,000,000 square yards, making the total general imports of Japanese cotton piece goods for the year a little under 49,000,000 square yards. Last May, during the Tariff Commission investigation of imports from Japan, it was established that there were then about 12,000,000 square yards of Japanese cotton piece goods in United States bonded warehouses. It would appear that it is the policy of the Japanese to maintain an inventory in bonded warehouses of about 12,000,000 square yards, which in the year just ended was the equivalent of about four months of average imports. Theoretically imported for re-export, these bonded warehouse stocks are, in actual practice, utilized as a source for 'spot' deliveries, thus relieving Japanese manufacturers of the handicap of being several weeks distant from the market and substantially increasing the competitive advantage they already enjoy in low wage costs.

"While import figures for December, 1935, show a decline from the previous month, it is disturbing to find that during December 57,302 square yards of Japanese unbleached cloth were imported for consumption. Aside from a few items of only a few hundred yards, this is the first sizeable lot of Japanese grey goods imported for consumption since the Tariff Act of 1930 became effective. The Institute is making every effort to find out promptly the types of goods involved in this latest development."

Processing and Weaving of Rayon Staple Fibre

By Adam Glover *

FIBRO, or rayon staple fibre threads are produced in a variety of different forms of yarn packages, chiefly according to the particular classes of fabrics for which they are intended, and the types of machines by which they are to be converted into warps and filling for the loom. In any case, "Fibro" threads are spun primarily as single strands and formed either into mule cops or ring bobbins, according to the type of spinning machine on which they are produced. Two or more single strands of yarn may subsequently be twisted together in order to produce a folded or ply yarn, or they may be twisted with other threads of a different character in order to produce "fancy" yarns or spun as slub yarns on the ring frame.

The subsequent operations of converting the threads from their primary forms into other styles of yarn packages are determined chiefly as to whether the yarn is required for warps or filling, and also by the method of preparing the warps and filling for the loom. For example, "Fibro" yarn may be reeled into hanks or skeins, wound upon flanged warpers' bobbins, wound into the form either of straight or parallel spools or cheeses, or into conical spools, or it may be wound into pirns, as may be required.

Assuming yarn to be purchased in its primary form of mule cops or on ring bobbins, its progress through the various stages of preparing it for weaving in the natural grey state comprises a series of consecutive operations in the following sequence, viz.: (1) winding; (2) warping; (3) sizing; (4) beaming or winding on; (5) looming, i.e., either by drawing-in, or twisting-in; (6) gaiting-up the warp and shedding harness in the loom ready for weaving.

WINDING MACHINES

The prevailing type of winding machine employed in the weaving trade is the vertical spindle winding machine constructed with either one row, or with two parallel rows of spindles on each side of the machine. Each spindle supports a flanged warpers' bobbin that fits quite loosely upon the spindle shank and rests upon a circular, metal disc-plate covered with a flannel or felt washer to serve as a soft cushion for the bobbin. Each spindle shank is furnished with a fixed warve or small grooved pulley to receive a cotton driving band from a tin driving drum extending for the entire length of the machine; and serves to drive all the winding spindles with a constant velocity. This type of winding machine is made in various modifications by different machine makers, but all embody the same general features, and are chiefly adapted for winding yarn from mule cops and ring bobbins.

In their course from their supply packages, the threads pass over some form of yarn tension device in order to apply the degree of tension most suitable for the counts of yarn being wound. It is not advisable to pass "Fibro" yarns over a brush in the winding machines. The threads are then passed through narrow slits of yarn clearer-guides in order to clear from the threads any impurities as well as defects inherent to spinning. These clearer-guides are carried by a traverse or guide-rail which moves up and down with a slow uniform traverse to guide the threads on to their respective bobbins.

Vertical spindle winding machines of the type just described are being largely superseded by various modifications of the more modern and efficient types of high-speed cheese and cone winders which are essential for the winding of yarn supply packages for high-speed beam warping. Warpers' bobbins and parallel wound spools are only suitable for slow-speed warping owing to the difficulty of controlling the tension of the threads when these are delivered from yarn packages that revolve in the bobbin creel as their threads are withdrawn by the unrolling method.

High-speed spool, cone and cheese winding machines comprise various modifications according to the different makers, but each of these types embody the same cardinal features in their general construction, and differ mainly in respect of the minor details of their equipment. In one type of spool winder, the threads are wound on to cone or parallel paper tubes that are placed on horizontal winding spindles that revolve with a constant velocity. In another type of conical or parallel spool winder, the paper tubes are fixed on wooden or metal carriers and bear against revolving driving drums, or against a metal driving shaft that revolves with a very high velocity. In one make of drum winder, the drums are "split," that is, they are formed in two similar halves, separated by a narrow, helical aperture which serves the function of a thread-guide and is known as a "split drum" winder. Drum winders constructed with plain driving drums are equipped with a yarn traversing motion for the purpose of guiding the threads on to their respective spools. In the machine constructed with a driving shaft, of about 1 in. diameter, the threads are guided on to their respective spools by what are described as "wing guides" consisting of two wings or blades of hardened brass fixed in reverse directions on a shaft situated below the winding shaft, and which distribute the threads with a quick traversing motion across the width of the cones.

As just stated, high-speed beam warping is possible only from conical spools and cheeses. These do not revolve, but remain stationary in the beaming creel and therefore deliver their threads over-end. They are made of large dimensions with a view to providing continuous

*In a lecture to the Ashton Managers' Association, in England.

threads of considerable length and reducing the amount of re-creeling. For this reason, these yarn packages contain from 3 lb. to 4 lb. of yarn, as against 1 lb. on the usual size of flanged warpers' bobbin. The over-end method of withdrawing the threads from these forms of yarn supply packages, whenever this method is practicable, is much more preferable to the unrolling method, as the former method permits of more complete and effective control over both the delivery and tension of the threads during warping which, in some cases, is performed at rates ranging from 500 to 900 yds. per minute, as compared with 70 to 90 yds. per minute on the older type of slow-speed beam warping machines, and which are still in regular use in many weaving mills.

BEAM WARPING

This method of warping is the prevailing method of preparing plain grey warps for slasher or tape sizing, and consists essentially of withdrawing any practicable number of threads simultaneously from a corresponding number of warpers' bobbins, parallel or conical spools, or cheeses, and winding them in an evenly disposed sheet of parallel threads on to what are variously described as "back," warpers', and "slashers" beams ready for slasher sizing. Beam warping machines are made in a variety of modifications by different makers, but in all embody the same general features in their construction.

In their progress from the supply packages in the creel to the warpers' beam, the warp threads first pass singly through consecutive dents of a back reed fixed in the rear part of the machine and immediately in front of the fore part of the creel. The object of the back reed is to effect an even distribution of the threads and also to keep them quite separate from each other so that they may be easily recovered and pieced in the event of breakages. Immediately on emerging from the back reed, the threads are conducted over a tin measuring roller of about 6 in. diameter, thence under one, two, or three light yarn tension rollers that rest quite freely, by their own gravity, upon the yarn. The function of these tension rollers is to maintain the threads at a suitable degree of tension, during warping, and, at the same time, they also serve to keep the yarn taut, when stopping the machine, and the threads continue to be delivered for a few seconds from rotating yarn packages. From the tension rollers, the threads pass over a grid extending across the full width of the machine, and at which point, each thread supports a light wire drop-pin, in the form of a hair-pin which, in the event of a thread breaking, drops between two revolving rollers which operate a stop-motion and thus stops the machine instantly, when the attendant recovers and pieces the broken thread. Immediately after passing over this guide, the threads are passed separately through the dents of an expanding reed or comb of which the teeth are open at the top, for the easier insertion of the threads, and which is adjusted, by the attendant, until the width of the sheet of threads corresponds with the width between the beam flanges. On leaving the expanding comb, fixed in the front part of the machine, the "Fibro" threads are immediately deflected over a guide-roller and wound finally on to the warpers' beam, ready for sizing.

The full beam is then cut out and replaced with an empty beam on which warping is resumed. Before sever-

ing the threads of the full beam, however, the attendant forms what is termed a "slashers" or "false" lease in order to maintain the sheet of threads in their correct relative positions, approximately, and thus assist the slasher attendant to keep the threads in the same order as they pass through the slasher sizing machine and finally on to the weavers' beam. Otherwise, if this precaution were not taken, the threads would become hopelessly crossed and entangled, and impossible to weave. This form of slashers' lease is made by inserting the teeth of an open reed or comb, with short teeth about 1 in. in length, through the threads, after which a grooved strip of wood is placed over the open ends of the teeth and tied on until the warpers' beams are gaited-up in the sizing machine and ready for sizing, when the combs are removed.

If the operation of beam warping is performed by means of a modern high-speed warping machine, this may only be effected by withdrawing the threads over-end from stationary supply packages, as, for example, ring or bottle bobbins, or preferably conical spools and narrow-gauge cheeses as in the Barber-Colman super high-speed method of warping at the almost incredible rate of 900 yds. per minute, with certain classes of yarn. In any method of high-speed warping, the yarn supply packages are supported on fixed carriers in creels of special design and construction, usually of the magazine type to permit of either two or three yarn packages grouped together, on a double or triple carrier, for each individual thread required on the warpers' beam.

SLASHER OR TAPE SIZING

On the completion of a "set" of warpers' or "back" beams, these are mounted with a zig-zag disposition in a beam creel situated in the rear of the slasher sizing machine, when the several sheets of threads from the respective beams are combined and passed together, as one single sheet of threads, through the sizing machine, where they are submitted to the process of sizing, drying, and beaming or winding-on to the weavers' beam situated in the extreme front part of the machine, all of which functions are performed concurrently by a single operation.

A slasher sizing machine is a composite machine comprising three principal sections, viz.: (1) the sizing apparatus situated at the extreme rear part of the machine, immediately in front of the creel, and consisting of a size-box containing hot size, an immersion roller, and either one pair or two pairs of sizing or squeezing rollers; (2) the drying and cooling apparatus situated at the extreme rear part of the machine, immediately in front of the creel, and consisting of a size-box containing hot size, an immersion roller, and either one pair or two pairs of sizing or squeezing rollers; (2) the drying and cooling apparatus situated in the central part of the machine, and consisting of either one steam heated, cavity cylinder of 9 ft. diameter, or two drum cylinders, one of 6 or 7 ft. diameter, and another of 4 ft. diameter, and one or else two revolving, cooling fans; and (3) the headstock, situated at the extreme front part of the machine, and comprising several dividing-rods for the purpose of separating the several sheets of threads delivered from the respective warpers' or "back" beams in the beam creel, an expanding reed or comb for the purpose of adjusting the width

of the warp to that of the weavers' beam, "cut-marking" and length measuring motions, yarn pressing rollers to compress the yarn more densely on the weavers' beam, and the driving gear to operate the machine and frictional driving mechanism adapted to drive the weavers' beam with a gradually diminishing velocity as the yarn diameter increases, thereby maintaining a constant rate of winding from the commencement to the completion of the weavers' beam. In some types of slasher sizing machines, the drying of the yarn is effected by passing it through a large drying chamber heated with hot air.

WEAVING "FIBRO"

Up to the present, these observations have been confined to a general survey of the essential features relating to the processing of yarn during the various stages of its progress previous to weaving; and although the several operations described are those adopted in regular weaving mill practice in the manufacture of cotton fabrics in general, it may be of special interest to observe that the same method of processing is, in every particular, equally well adapted for the processing of yarns produced from "Fibro" staple fibre. The same observation is equally true with reference to the important problem of weaving "Fibro" yarns, whether as warp or filling, into fabrics of almost every conceivable type and of infinite variety of texture, and for every purpose, including fabrics for domestic use, dress fabrics, and fabrics for many commercial purposes.

Following upon the operation of "looming," that of "gaiting-up" a "Fibro" warp in the loom, ready for the weaver, is virtually identical with the same procedure adopted for cotton warps, that is, in looms of corresponding type, and for similar classes of fabrics. Take for example, the "gaiting-up" of a "Fibro" warp in a plain calico loom of the ordinary Lancashire type, for weaving plain cloth. The warp beam is mounted in the loom brackets, situated below the back rest, which latter may be of the vibrating type. If, however, the "Fibro" warp is to be woven in a loom mounted with a dobby, or a jacquard machine, in that case, it is advisable to employ a strong and highly polished back rest that will revolve quite freely in its bearings, and of sufficient strength to resist yielding or bending under the stress-strain of the warp tension, due to the effect of shedding, and of beating-up the picks of weft, during weaving.

After fixing the warp beam in its position in the loom brackets, the overlooker cuts the cords by which the healds and reed have been temporarily suspended, draws these forward, and then proceeds to tie up the healds to top roller straps above, and to the tappet treadles below, and also to fix the reed in its position in the loom sley. After this, he wraps around the taking-up roller a lap or piece of cloth, the free end of which is formed with a slitted hem for the insertion of a thin metal strip or tie-rod to which the overlooker lashes the initial ends of the warp threads to enable him to draw them forward, bodily, until the tie-rod is passed well over the breast rail in front of the loom. When tying-up the warp threads to this tie-rod, it is of the greatest importance to ensure that all warp threads are tied-up with exactly the same degree of tension, across the entire width of the warp, uniformly, otherwise, any irregularity of tension will impose greater

strain upon those that are taut, and thus render these threads more liable to breakage, during weaving. The overlooker then proceeds to make the final adjustment of the healds and reed to ensure the formation of a true and clean warp shed of the correct depth across the entire width of the warp, from selvage to selvage. Then, after inserting the lease-rods, in precisely the same manner for the "Fibro" warp, as for a cotton warp, he goes to the back of the loom to make the necessary adjustment of chains or ropes around the ruffles of the warp beam, and to adjust the weights on the weighting levers suitably to ensure the requisite degree of tension on the warp threads, according to the character of the cloth to be woven.

In the case of a new loom, "gaiting-up" also includes the proper fixing and adjustment of the loom temples, the setting and timing of all working parts to operate in perfect unison, the equipment of the loom with picking and check-straps, pickers, and all other incidental accessories necessary to establish the loom as efficiently as possible and in good working order. The shuttles must also be in good condition, true and of a size and type suitable for the weaving of "Fibro" filling. When the correct pick wheels are fixed, according to the number of picks to be inserted in the cloth, the overlooker then proceeds to insert the first picks of filling to ensure that the loom and all its appurtenances are correctly attuned, and then hands the loom over to the weaver who, after weaving a short "lap" or length of cloth, asks the overlooker to count and check the number of picks per inch, for verification. Provided the warp has been properly processed in the winding, warping, and sizing, efficiently "gaited-up," and all loom adjustments properly made by the overlooker, the weaver will experience no greater difficulty in the weaving of cloth from "Fibro" warp and filling than in the weaving of cotton fabrics.

In conclusion, it is now definitely established in actual commercial and weaving mill practice that yarns produced from "Fibro" (staple fibre) may be woven into all the infinite variety of fabrics for which cotton is generally employed, comprising all types of domestic and dress fabrics of every variety of texture.

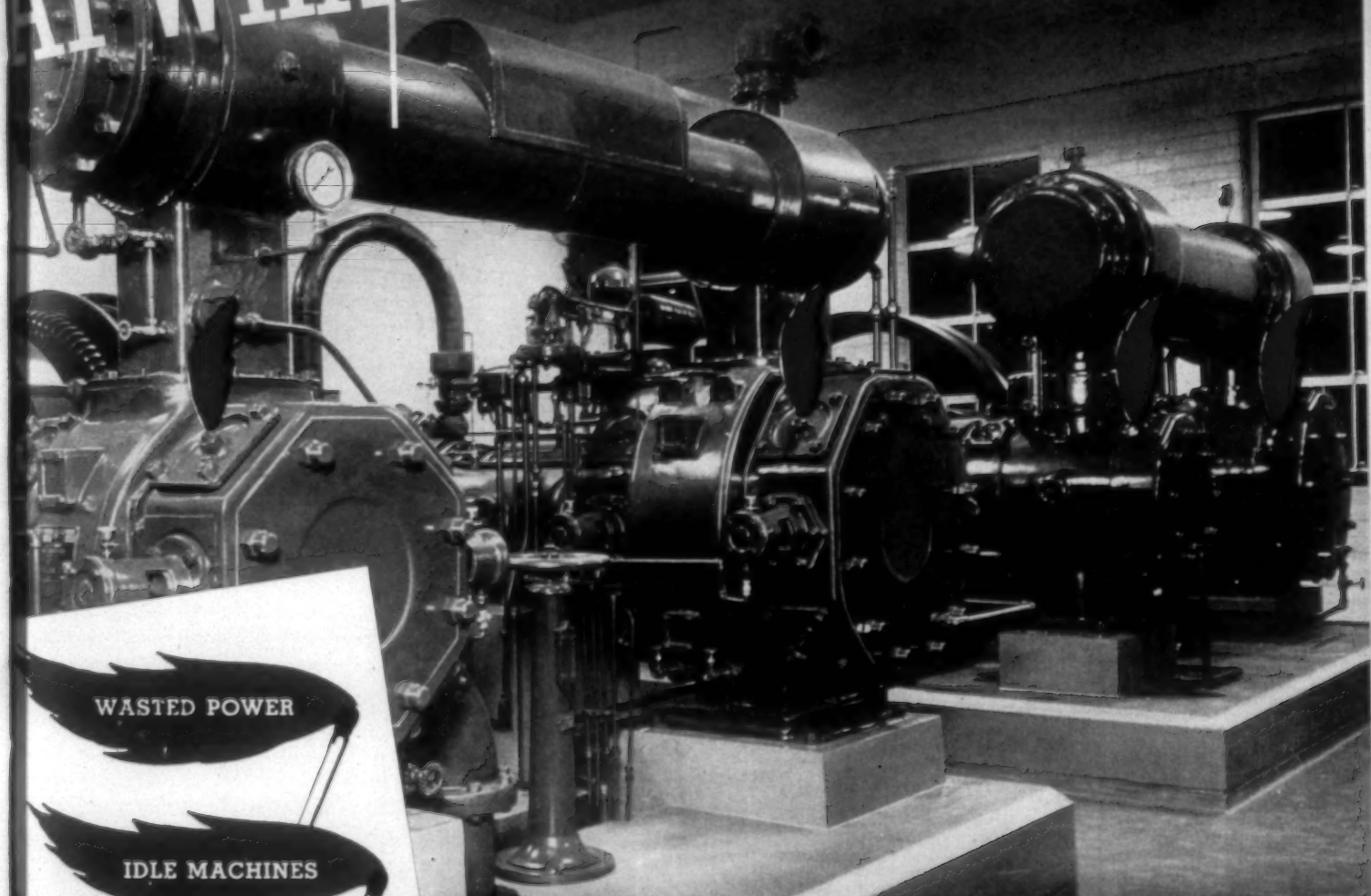
Cotton Mill Code Pledges Noted

Mills representing several million spindles have signed the pledge to continue operation under basic principles of the former NRA code, and other signatures are being received by the Cotton-Textile Institute, Inc., in every mail, declares W. M. McLaurine, secretary and treasurer of the American Cotton Manufacturers' Association.

In some cases, Mr. McLaurine said, the funds recaptured from escrow by the mills will not be sufficient to pay the customers, according to the specific clauses referred to in the resolution passed at the Washington meeting, without having to draw upon other resources. This was said to be particularly true when further loss on the part of the mill is indicated by a loss of return in floor stock taxes and also by the depreciation of stocks on hand and other expenses incident to the handling of funds during the time when the money was in escrow.



TAKE A GOOD LOOK AT WHAT YOU DON'T SEE!



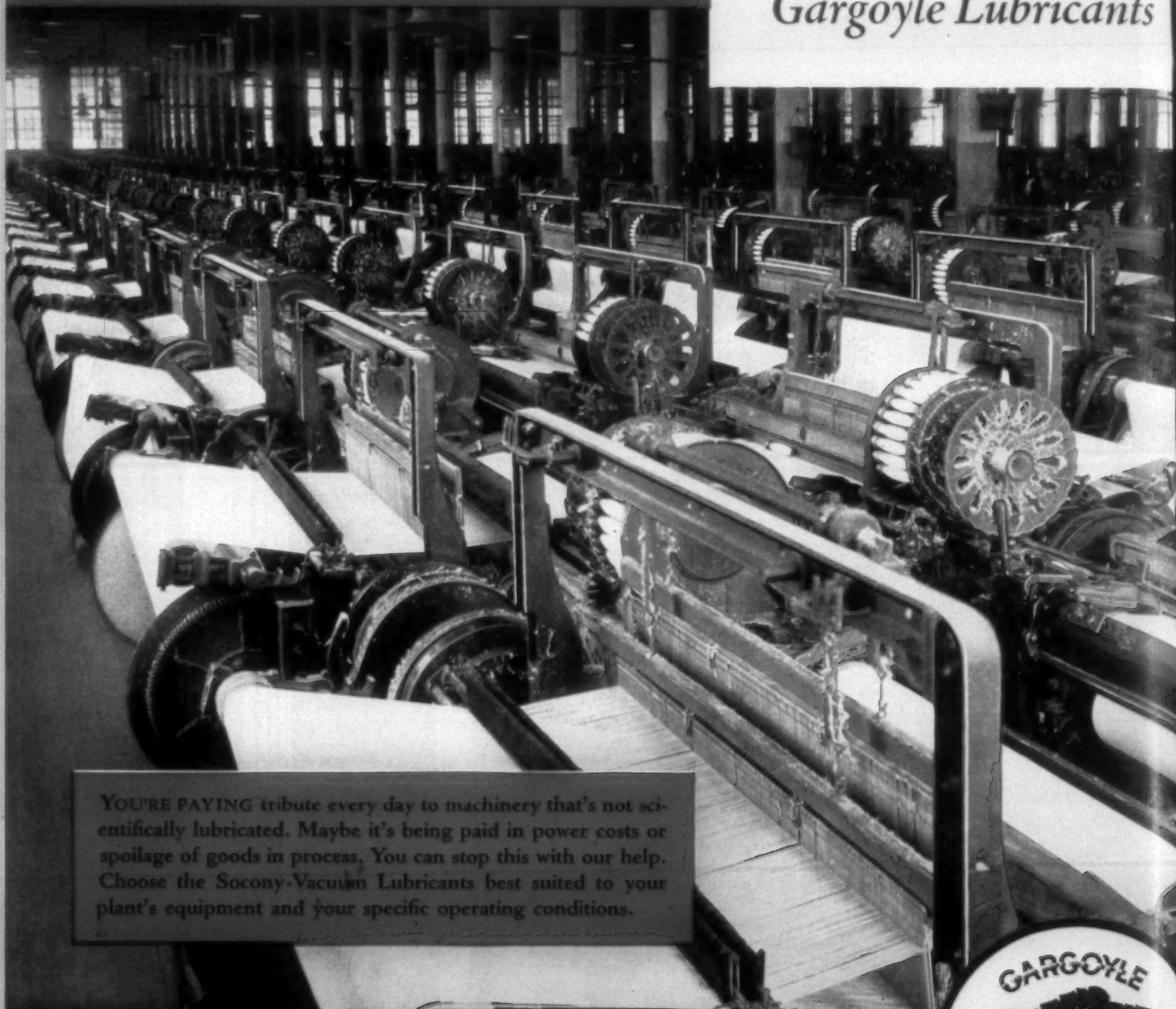
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American Cotton and World Consumption

World cotton consumption for the first five months of the current fiscal year indicates that a new record will be set. If the rate of consumption continues until July 31st, the world will consume more cotton during 1935-36 than during any other year since mankind first began to consume cotton. But it will not mean record-breaking consumption of American cotton. On the contrary, if the rate of the past five months continues, world consumption of American cotton during the current year will be lower than any year except two (last year and 1930-31) in the past eleven years. And consumption of foreign cotton for the second consecutive year will be in excess of 14,000,000 bales. World consumption of cotton for the five months ending December 31st, including all growths, was estimated by the New York Cotton Exchange Service on Monday as 10,883,000 bales, of which 5,010,000 bales were American and 5,873,000 bales were foreign cotton. If the same rate of consumption is continued during the rest of the fiscal year, the year's consumption will be 12,000,000 bales of American and 14,100,000 bales of foreign cotton, making a total of 26,100,000 bales, the largest amount of cotton ever consumed by the world in a year. It is pointed out by the Exchange Service that inasmuch as the American crop of 1935 amounted to only 10,641,000 bales, world consumption of 12,000,000 bales of American cotton will reduce the end-of-the-season carry-over of American cotton by 1,300,000 or 1,400,000 bales, or from slightly more than 9,000,000 bales to about 7,700,000 bales. But it adds the following comment: "There is a possibility, however, that the large foreign crop will stimulate consumption of foreign cottons during the latter part of the season." It should be pointed out, in this connection, that even if this should not happen, and the present rate of consumption of both American and foreign cotton should continue, it will mean that only 46 per cent of the cotton consumed by the world will be American, while 54 per cent will be foreign cotton. With the exception of the record low of last year, American cotton's share of world consumption, in that event, would be the lowest since the Civil War. During the five years ending July 31, 1929, the period immediately preceding the collapse of American export trade, 59.8 per cent of the world's consumption of cotton was American cotton. In other words, the foreign cotton grower's share of world consumption has gone up from 40.2 per cent to 54 per cent, whereas the American cotton grower's share has declined from 59.8 per cent to 46 per cent. It is for this reason that it is insisted that control of cotton production must be continued. If world consumption of American cotton during the current year should reach 12,000,000 bales, and the end-of-the-season carry-over should be 7,700,000 bales, it is plain that the only way this carry-over can be reduced further, unless there is a further increase in the consumption of American cotton, would be to hold down American production below 12,000,000 bales. The average annual production of American cotton during the five years ending with 1913, twenty-two years ago, was more than 13,000,000 bales, and the average annual production for the five years ending with 1929 was more than 15,000,000 bales. And yet the plans that are being put forward to deal with the cotton problem effectively contemplate holding down American production to 12,000,000 bales. These figures show how far we are away from the right kind of a solution of the cotton problem. Under any plan that does not include ways and

means of restoring consumption of American cotton to normal levels, it will continue to be necessary to hold down the production of American cotton and to employ less than normal land and labor in the production of cotton in the United States.—*Texas Weekly*.

Howard Coffin is Optimistic

Howard Coffin, chairman of the board of Southeastern Cottons, Inc., believes that business in cotton goods will show steady improvement this year. He expressed this opinion while in Charlotte last week attending a meeting of his organization's executive committee. The company acts as selling agents for 40 Southern mills.

Mr. Coffin believes that the removal of the processing tax will be a material factor in aiding mill business. He stated that the improvement in general business would also be reflected in more active textile trade.

He is also of the opinion that the great majority of the mills will continue to maintain the standards of hours and wages that were set up under the former code. Although the industry has many problems to consider, Mr. Coffin thinks that the year should be one of substantial improvement, despite any unfavorable factors that are noted at present.

Mr. Coffin was accompanied to Charlotte by Richard Reeves, Daniel Burke and Elroy Curtis, all of the executive staff of Southeastern Cottons, Inc.

Mill men who attended the meeting of the committee included Elliott Springs, of the Springs Cotton Mills in South Carolina; J. A. Chapman and J. A. Chapman, Jr., of Spartanburg, officials of the Riverdale Mills at Enoree, S. C.; J. Choice Evins, president of the D. E. Converse Company at Glendale, S. C.; W. B. Cole, of the Hannah-Pickett Mills, and John W. Porter, of Steele's Mills at Rockingham.

American Enka Offers Staple Fiber

American Enka Corporation has started offering staple fiber for the production of spun rayon yarns, and at present is sampling its fiber among a number of mills.

The fiber is produced by its affiliates in Holland. The company stocks in this country fiber of 1½ denier, 1½-inch staple length but can give reasonably prompt delivery from abroad on a number of other descriptions of fiber.

Work On Meadville Plant Additions To Begin Shortly

Meadville, Pa.—Work on the addition to the acetate yarn plant here of The Viscose Company will be started within 60 days. This will double the company's production capacity.

The new unit will increase the plant's present employment total of 1,100 to more than 2,000. Local estimates place the cost of the new unit at a sum approaching 2 million dollars. The acetate yarn plant has been operating at capacity for 18 months, and during the past year the production has been increased.

Company officials said the new unit will be designed along the same lines as the present plant, except that the present power house and machine shop will serve both units.

The Meadville Housing Corporation has made it known that it will erect 202 new dwellings at a cost of more than 1 million dollars, financed by the Federal Government.

Modern Methods In Textile Mills

By "Cabut"

AT the outset I am hesitating between two conflicting desires, being reminded of a statement made to me by a splendid school man "that teaching teaches the teacher" and a remark of a hard-headed self-made business man "that when a man can, he does, when he can't, he teaches."

Leaning to the belief that teaching does really teach the teacher when it concerns the proper instruction of key men and operatives in textile mills I am constrained to put some thoughts in writing. This is more or less prompted because the writer has been asked several times lately what is wrong with the textile mills.

Some one made the statement that *profit* is the only purpose of production or commerce. This is largely true. It is just as much a crime to go into business and lose money by cut-throat competition, as it is to exploit labor and cheat the public.

The sun is fast setting on the old Rule of Thumb method of operating textile mills. Modern management, or scientific management, if you please, is absolutely necessary to a textile mill. In a great many mills matters of extreme trivial importance are still receiving as much weight as those of major significance. I hold no brief for so-called labor, but until mill management has secured the maximum efficiency from materials, equipment, selling and distribution, it would be unfair to reduce wages in an effort to show a profit. It is quite easy to determine suitable materials that enter into a finished product. It is also comparatively easy to determine and secure the maximum efficiency of equipment. It is no longer guesswork as to the proper work-load for the average employee to secure maximum efficiency, on any job in the mill.

MANAGEMENT COVERS MANY DETAILS

Modern management is concerned with studies of markets, market conditions, processes, equipment, materials, labor, burden, selling and distribution. It is the type of management that makes exhaustive studies, tests, checking and rechecking and then carries on the business in the light that these studies and researches reveal. Records are of no use unless they produce action. The writer questions the value of motion studies, but time studies are absolutely necessary for the efficient operation of a textile mill. Careful consideration should be given to any new machine or process. It ought not to be adopted, however, simply because it is new, but only after careful study proves a saving in labor, burden, etc., over the cost of repairs and interest on investment.

OUTSIDE ENGINEERS

If outside engineering experts are called in, unless reputable engineers, oftentimes extravagant promises are made if they are allowed to systematize a mill. The test is permanence. Introduction of radical changes in a textile mill should be made rather slowly. Most of the so-called failures in applying efficiency methods in textile

mills are principally two; the lack of ability on the part of mill managers, superintendents and overseers to acquire the vital mental attitude, and too great haste in application. The latter is more often the case than the former. A sensible efficiency engineer will stress the danger of attempting radical changes in the management or methods too fast. Each step should be made permanent before the next is started. In fairness to these engineering concerns some of the causes that retard rapid progress are: firstly, mental laziness and old Rule of Thumb conservatism of mill executives, superintendents and overseers; secondly, the fact that many times the objectives are not appreciated. On the other hand, not all of the so-called efficiency experts are competent to introduce modern methods in textile mills. Often ability within the organization is overlooked and expensive outside engineers are brought in that cost the mill many times what it otherwise should. The writer is of the opinion that any mill can afford to employ a thoroughly informed and trained efficiency man to hunt out and stop leaks. He should be a man who has a thorough mechanical background, textile technical training, experience in cost work, and plenty of practical mill experience. Such a man can prove himself profitable even in a comparatively small mill. To manufacture economically maximum production and permanent efficiency *must* be maintained at all times.

The writer's experience has been, in extending labor, standardizing speeds, drafts and twists to secure maximum efficiency, even during the past few years, that what the worker wants, and demands, is steady employment and the highest rate of income he can get. So long as he can get these, the method of payment is of no consequence.

These are times when it is necessary to call in a reputable engineering concern. The efficiency man connected with the mill, however, can usually determine if the type of fabrics can be made profitably. Working with the sales department he can determine whether to make some other class of goods, concentrating on fewer styles, counts and colors to reduce costs, if to finish the goods better to secure a higher price and reputation, or to cheapen the fabric and finish to lower the selling price. Proper emphasis should be placed on the materials used in the product on processes, equipment, labor, burden, selling and profits.

TRAINING MEN FOR KEY POSITIONS

Selection and hiring of men for key positions should be under the direction of a trained engineer or vocational director. Thought should be given to fitting employees into right places, rather than promiscuous hiring and indiscriminate discharging of employees because they fail on one job, especially if they are honest and co-operative. Training of young workers should be given proper consideration. Prevention of accidents, accident insurance, and human welfare (not charity) are of major import-

ance. The worth-while employee is interested in earning what he gets, and wants it in the *pay envelope*. Time studies should be made regularly by a man thoroughly familiar with the task, method and purpose of making these studies. Work loads should then be properly assigned based on these records. Instruction cards should be issued or posted in conspicuous places, so that operatives know exactly what is expected of them and the best method of performing their duties. The writer has seen extreme confusion in a picker room during a fire, resulting in a much greater loss of stock and damage than was necessary. Simple instructions posted as to the best way of caring for the fire, and requiring operatives to familiarize themselves with these instructions, would have avoided it.

SOURCES OF POSSIBLE SAVINGS

Control of waste is of major importance in a textile mill and extreme measures should be enforced. Waste in any form eats away the meager profits in a textile mill.

Such items as boilers, engines, turbines, condensers, generators, pumps, heating systems, lighting systems, humidifier systems, cost of fuel, efficiency of the plant and its many items, proper recording of complete operations and possible savings should be considered. The efficiency man should be able to observe, record, analyze and compare the essential facts in relation to all that enters into or affects the economy and the cost of the product.

Designing and sample making are of major importance in a fancy mill. Effort should be made to keep the results proportionate to the cost. Usually sample making is very greatly underestimated in a fancy mill. Mill expenses vary greatly in a mill of this type. When looms are stopped to be changed over, when running many styles, usually large sums of money is spent for equipment such as harnesses, reeds, other equipment, labor, seconds and idle machinery.

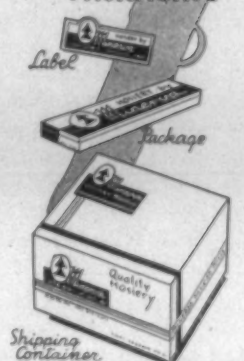
A great many mills are handicapped by inefficient selling, perhaps more so than by lack of ability on the part of mill managers. Criticisms, complaints and claims are often heaped upon the mills when they are unable to defend themselves.

This subject is rather unlimited. One could take up in detail the individual machines and processes, pointing out the things that make for the most efficient operation of a mill. Details of making time studies and tests, proper methods of assigning work-loads, methods of creating an efficient mill organization, the serious evils of labor troubles, proper methods and purposes of accounting, the microbes that affects textile concerns, inventories, disposal of scrap material, utilization or disposal of by-products, selling and distribution, taxes, etc.

The writer intends no reflection on and does not intend to minimize the splendid work done by some engineering concerns in the least. Rather does he believe there is more need now than ever for such work to be done. Almost without exception mills can profit by their employment. It is the writer's hope that the textile industry will take the high place it deserves, for in no industry is a higher engineering skill required, greater knowledge and patience required to build up an efficient textile mill organization.

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Personal News

George Brownlee has been elected secretary of the Easley Mills, Easley, S. C., and the Woodside Mills, Greenville.

J. W. McElhannon, of Laurinburg, N. C., has been elected secretary and treasurer of the Durham Cotton Manufacturing Company, Durham, N. C. He succeeds E. O. Steinbach, who resigned to become manager of the Florence Mills, Forest City, N. C. Mr. McElhannon has for some time been superintendent of the Waverly Mills, Inc., at Laurinburg.

W. H. Beattie, president of the Wallace Manufacturing Company, Jonesville, S. C., has also been elected vice-president and treasurer of the Woodside Mills, Greenville, and the Easley Mills, Easley.

J. W. Burnett has been elected president of the Southern Weaving Company, Greenville, S. C. He succeeds F. D. Murdock, who resigned last fall and has been acting as president since that time. W. C. Cleveland was elected vice-president and William Lowndes, secretary.

S. M. Beattie, president of the Piedmont Mills, Piedmont, S. C., has also been elected president of the Woodside Mills, Greenville, and the Easley Mills, Easley, S. C. Ellis M. Johnson, who retired as president and treasurer of these groups, was elected chairman of the board. The companies operate six mills. Mr. Johnson, in addition, will attend to the other affairs of the Woodside interests, including Myrtle Beach, the Woodside Building and the Woodside Securities Company.

Mr. Maguire has organized a new factoring company, capitalized at \$3,500,000 to be known as John P. Maguire & Co. A number of officials of Textile Banking Company have resigned to join the new organization. They include John H. Jephson, Fred K. H. Wandelt, Snelson Chesney and William H. Bischof, vice-presidents; Howard J. Steib, vice-president and treasurer; Robert B. Matthews, L. Prink, of the credit department; William A. Murray, assistant treasurer and auditor, and Frank Maguire, new business department.

A. E. Duncan, chairman of the board of Commercial Credit Company, which controls Textile Banking Company, has been elected president of the latter company. He succeeds John M. Maguire.

Howard R. Hart, formerly general superintendent of the Aiken, Bath, Clearwater and Langley plants of the

United Merchants and Manufacturers, has accepted a position as assistant to J. B. Harris, vice-president of the Greenwood Cotton Mill, Ninety-Six Cotton Mill and Mathews Cotton Mill. Before going to Langley Mr. Hart was superintendent of the Victory Manufacturing Company, Fayetteville, N. C., and the Durham Cotton Manufacturing Company, East Durham, N. C. He is a member of the Board of Governors of the Southern Textile Association.

Chemists Discuss Hosiery Problems

Greensboro, N. C.—Problems incident to the hosiery manufacturing industry were the principal topics considered at the meeting of the Piedmont section of the American Association of Textile Chemists and Colorists here.

A banquet also featured the night session. Important afternoon subjects discussed were: "The Throwing of Silk and Rayon Yarns," by George Searell, of Asheville; "Dyeing and Hosiery," by Wesley J. Pickens, technical advisor to hosiery mills representing the E. I. du Pont de Nemours interests, and "Spot Proofing and Finishing of Hosiery," by L. O. Koons, of Philadelphia.

Dr. M. R. Tarbue, director of the division of education of the University of North Carolina, spoke on "Psychological Analysis Applied to Unemployment Problems" at the banquet. Chester L. Eddy, of Travelers Rest, S. C., chairman of the Piedmont Section, presided.

All Knit Cones Higher

All of the producers of 150 denier oiled knitting cones have now raised their prices to the 50-cent level, it being learned that the Viscose Company adjusted its prices to the new levels.

While underwear manufacturers have not as yet reflected the increase in their lines, they report noticing a firming of prices in the knit fabric market.

OBITUARY

M. LUTHER DILLARD

Greenville, S. C.—M. Luther Dillard, for the past 40 years outside superintendent for the F. W. Poe Manufacturing Company, died unexpectedly Monday night at the hospital after a three days' illness, resulting from injuries received earlier the past week in a fall.

Mr. Dillard was a native of Clinton, but came to Greenville when he was a young man. He was 66 years of age.

He is survived by two sons, Fred Dillard, of Greenville, and David Dillard, a student at the Citadel in Charleston.

Mr. Dillard first went to work at Poe Mill when the plans for the village were started, his first work consisting in laying out the streets for the plant. Eight years ago he was honored by officials of the mill with a banquet, in recognition of his being the oldest employee living at the mill.

JAMES F. GALLIVAN

Greenville, S. C.—James F. Gallivan, head of the Gallivan Building Company, died Saturday afternoon after an illness of two days. Mr. Gallivan had for many years been active in construction of Southern cotton mills and was known by many textile men. He was a director of the Southern Bleachery and was identified with other plants.

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Moisture Testing Devices

H. W. Sullivan, Ltd., London, electrical instrument manufacturers, have recently placed on the market two interesting instruments for the testing of moisture, namely, the Hygrotron and the Hygrophon, states the British Department of Overseas Trade.

The Hygrotron is an audio electrical moisture meter for rapidly determining the moisture content of various materials, especially textiles. As is well known the materials used in the textile industry, such as wool, silk, cotton, flax, jute, hemp, etc., absorb water vapor from the surrounding atmosphere to an extent which varies according to the humidity of the atmosphere. In most branches of the textile industries it is essential that the water content of the materials used should be known within narrow limits if necessary, and to meet this need agreed methods of determining moisture content have been adopted, and are in general operation. These methods, however, all require the use of special conditioning chambers and need several hours for one test.

RAPID DETERMINATION

The Hygrotron has been developed with a view to overcoming this delay, and by means of this instrument the moisture content can be determined in a few minutes. The method of operation is as follows: A certain predetermined weight of the material to be tested is placed in a special container which is then connected to the Hygrotron. The control knob is turned until a galvanometer on the front panel gives a maximum deflection. Above the control knob there is a scale and from the value read on this scale the moisture content can be obtained by reference to a calibration chart supplied with the instrument.

The range covered is from a few per cent to over 30 per cent of moisture and it is claimed that the Hygrotron gives results which are accurate within a limit of 0.3 per cent. The instrument is fed directly from the mains and made either for alternating current supply of any voltage or for direct current mains of 220 volts. The apparatus weighs only 11 kilogrammes, and its small dimensions 38 cms. by 27 cms. by 19 cms. render it extremely handy and easily transportable.

MATERIALS TESTED

The Hygrotron has been developed to determine the water content of hygroscopic materials such as wood, grain, meal, flour, tobacco, etc.

The principle on which the apparatus works is the electrostatic charging of a highly insulated test condenser and its subsequent discharge by means of a special electronic valve, which is connected to a telephone. Discharge always occurs at the same value and the number of discharges, heard as beats in the telephone, in a given period is a direct indication of the water content of the material.

The electrode is designed according to the nature of the material to be tested. In the case of grain and flour the material to be tested is compressed by means of a spring in a cylinder. For wood the testing piece is placed between a plate and a weight. Long leads can be supplied so that the test on wood can be made in the drying ovens or in the timber yards.

It is claimed that the results are accurate in the case of wood within a limit of 1 per cent and within 0.15 per cent in the case of grain and flour. The dimensions of the Hygrophon are 27 by 17 by 17 cms. and the weight 8.7 kg.

Both instruments have been submitted to prominent experts in the respective industries whose reports have been extremely favorable.

WPA Builds Silk Plant in Mississippi

Ellisville, Miss.—For the construction of a silk mill at Ellisville in connection with the Jones County Junior College and A. H. S., Jones County will pay \$8,000 and the United States Government the balance, or about \$24,000, Senator M. P. Bush stated.

When completed, the new mill, built as a WPA project, will give employment to about 75 students. The county's share will be realized from the one-half mill levied for the A. H. S. building.

A spokesman for the board of trustees in speaking of the new mill stated: "It will give the students factory training at graduation and also a trade with which to start earnings immediately if they find themselves without a position fitting their educational training."

He added: "The status of building a vocational training school building for the Jones County Junior College and A. H. S. is in line with the ideas and hopes of Gov. Hugh L. White."

Japan's 1935 Rayon Production

Yokohama.—Japanese rayon production for 1935 was 224,042,000 pounds. Production by members of the Japan Rayon Association was 201,032,000 pounds, gaining 31 per cent, or 63,236,000 pounds over 1934 production of 137,795,000 pounds. Production by non-members was 23,010,000 pounds.

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Says Cotton Problem Unsolved

"AS we view the irregular and erratic price movements and the bewildered state of trade opinion, it is impossible to escape the conclusion that the Supreme Court decision on the AAA neither removed nor solved the cotton problem. Whether the action of this tribunal will lead to the formulation of a policy constitutional in its aspects and workable in practice depends largely on whether the approach is from a political or economic standpoint. It is our belief, previously and unequivocally expressed, that the soil conservation proposal viewed in its broader phases should constitute the basis for a sound and acceptable program," says C. T. Revere, of Munds, Winslow & Potter.

"We do not feel ourselves alone in taking this stand. Here we have an outline from the committees of both the Senate and the House embodying these features. Only a week or so ago former President Hoover set forth suggestions differing in no essential respect from the plan outlined by these two committees. Former Governor Lowden, widely known as one of the keenest students of agricultural problems in the United States, called attention to practically identical suggestions offered by him in 1930. Just to keep up with the procession, we again point out that we offered this approach to dealing with the farm problem in October, 1930.

"Recently we stated that we felt it would require a lot of political or legislative bungling to put such a formula in the category of unconstitutionality. Why should it necessarily be made unconstitutional? As we see it, this taint of invalidity could come only through the insistence on the element of "control" or "purchased compliance" having a sinister undercurrent of coercion.

"As we see it, there is no need of concealment and the program can be approached in a spirit of open frankness and sincerity. The curse of American agriculture, the chief source of clamor and discontent, is the effort to protect and uphold the submarginal farmer on submarginal land in his participation in a competitive world market. The shielding of these elements inevitably leads to the destruction of the efficient producer, through the attempt to establish a price level that will give the inefficient grower a profit, and thus induce an over-production that inexorably leads to a price collapse.

"Marginal and submarginal lands have their place in the national economy, but this is not in the production of competitive world crops. The retirement of these areas from such tillage is both socially and economically desirable. Moreover, much of our good farm lands have become depleted in their humus content, and through lessened fertility and the ravages of erosion are gradually being transformed from an asset into a national liability.

"In order to retire submarginal and even some marginal areas from devotion to competitive crops and consign them to other uses, to induce the planting of soil-building crops on lands of depleted fertility, the Government—the people of the United States—can afford to make an investment that will yield splendid returns to our people as a whole.

"Anyone even casually familiar with the financial posi-

tion of American agriculture realizes that the farmer himself is unable to finance such an operation. In order to gain his co-operation in such a constructive program, the expense of this undertaking must be borne out of the public treasury, no matter how the funds may be allocated or earmarked.

"An operation of this character need not bear the odium of coercion or bribery. It is true that segregation of infertile lands and the resort to soil-building crops or practice of crop rotation would limit the area that otherwise might be devoted to cotton. For two years, possibly, we probably would see a continuation of restricted cotton acreage. In that interval the effect on cotton prices would be stimulating to the extent that the production of American cotton figured in the world price equation.

"Our limitation to the two-year term is intentional. After that period, undoubtedly more lands would be released, and the increased fertility resulting from crop rotation and soil-building crops would bring a reversion to greatly increased production. Prices probably would be lower unless meantime world demand for cotton and the expansion of new uses for this commodity should exert a stabilizing influence.

"However, an enormous compensation would be forthcoming in increased yields per acre and consequently lowered production costs. Profits would come from improved efficiency rather than a price rise stimulated by scarcity.

"If in that interim we shall have made an approach to tariff reform, with facilities afforded for world interchange of goods, an expanded export market would furnish the outlet for a surplus production offered on a basis competing freely with outside growths.

"In other words, we are confident that the soil conservation program, soundly implemented from a legislative standpoint and also soundly administered, would provide an *automatic* control of production for a period of probably two years and place our cotton growing industry on a basis where it need fear no foreign competition. An essential corollary to such program is the rebuilding of our export trade to provide an outlet for a surplus that can be exchanged and sold on a competitive basis.

"In sum, we uphold the soil conservation approach as soundly economic, automatic in its control for a reasonable period, and in no sense violative of constitutional inhibitions."

Swatch Book From Institute

With an extensive array of bright cottons of every type, weight and texture in support of its forecast for colorful leap year fashions, the Cotton-Textile Institute has just released for distribution its 1936 Spring and Summer Swatch book.

Singled out for special emphasis are the piques—"for evening coats and dresses, sports and day-time frocks, and costume accessories"; rustic crashes featuring "natural" grounds; fine seersuckers and crinkled textures; sheers with corded and raised surfaces and showing peasant designs and unusual color contrasts; formal cottons

of airy femininity; nubbed novelties for sportswear; coatings and wash suitings of hand-loomed appearance; and a host of prints, large and small, bold and demure, that show the mark of Tahitian, Ethiopian, Oriental, peasant and modern influences.

By way of widening the usefulness of the swatching service among retailers, garment manufacturers and clothing teachers in high schools and colleges, the Institute's style staff has prepared a special insert presenting the twelve outstanding types of cotton fashions destined for popular favor this coming summer. These include the casual coat for daytime or evening wear; the two-piece tailored summer suit and separate blouses; the dressy jacket costume; the dark sheer townwear dress; the culotte outfit; the golf and tennis dresses; the shirtwaist frock; the two-piece spectator sports dress with contrasting blouse and skirt; the mannish slacks and finally the crisp cottons for summer dining and dancing.

Hosiery Shipments Largest Since 1929

Shipments of all types of hosiery during 1935 reached 111,268,099 dozens, the largest for any year since 1929. The gain over 1934 was 7,835,051 dozens, according to the statistical bulletin of the National Association of Hosiery Manufacturers.

"Total shipments of all types of hosiery in December, 1935, at 8,648,372 dozen pairs were approximately 427,000 dozen pairs, or 5 per cent more than total shipments in December of 1934. As was to be expected, however, there was the usual decrease of approximately 15 per cent in December shipments as compared with the preceding month. This season slackening in demand was felt in every type of hosiery except boys' socks, infants' socks, and anklets.

"Total production of all types of hosiery in December, 1935, was 8,917,906 dozen pairs. Production generally was well gauged with respect to shipments. A gain of some 300,000 dozen pairs in stocks of anklets in December is a condition which usually occurs during the winter months, when manufacturers of anklets prepare to meet the heavy Spring demand and to fulfill Spring delivery commitments.

"For the entire year 1935, total shipments of all types of hosiery was 111,268,099 dozen pairs, a gain of 7,835,051 dozen pairs, or 7 per cent, over the 103,433,048 dozen pairs shipped in 1934. Total shipments in 1935 represented a new high point since 1929. Shipments increased in 1935, as compared with 1934, for all types except women's seamless cotton and rayon, boys' socks, misses' ribbed goods, and cotton bundle goods. Over 34,000,000 dozen pairs of women's full-fashioned hosiery were shipped in 1935, a new high record for all time.

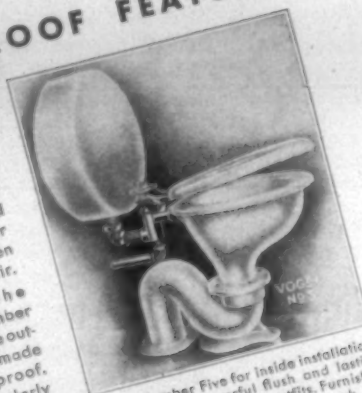
"Total production of all types of hosiery in 1935, at 111,522,434 dozen pairs, was approximately equal to shipments. The Bulletin comments that production generally was kept within the bounds set by shipments for the various types of hosiery, and that from a statistical point of view the industry has shown considerable improvement throughout the past year. Where stocks were built up, as in the case of full-fashioned hosiery, there was justification in the higher level of shipments in 1935, as compared with 1934. The decreased demand for certain types of hosiery in 1935, as compared with 1934, in practically all cases was accompanied by a reduction in stocks.

"The number of employees in the hosiery industry reached a peak of 149,326 in October, 1935, and in spite

of the seasonal decline in operations during November and December, there were still 147,053 on the industry's payroll at the year end. These figures represent an increase of approximately 15,000 over the number of employees in the Code year 1933."

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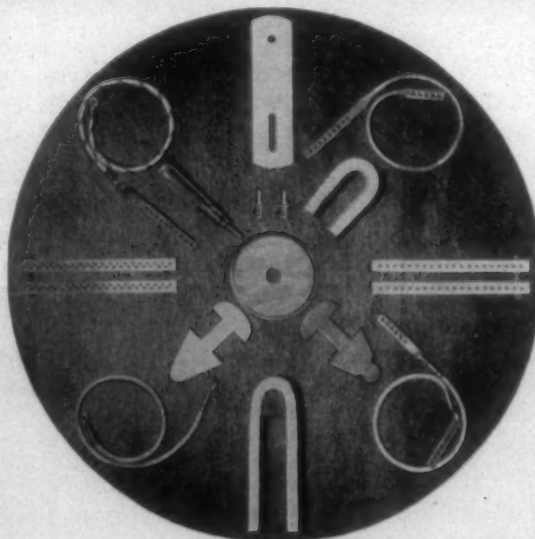


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TEXTILE BULLETIN

Member of

Audit Bureau of Circulations and Associated Business Papers, Inc.
Published Every Thursday By

CLARK PUBLISHING COMPANY

Offices: 118 West Fourth Street, Charlotte, N. C.

Eastern Office: 434 New Industrial Trust Bldg., Providence, R. I.

DAVID CLARK	Managing Editor
D. H. HILL, JR.	Associate Editor
JUNIUS M. SMITH	Business Manager

SUBSCRIPTION

One year, payable in advance	\$2.00
Other Countries in Postal Union	4.00
Single Copies	.10

Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

Time to Take The Offensive

LEADERS of the textile industry are showing a more aggressive attitude in opposing various measures that certain interests would impose upon it. This, in our opinion, is exactly what the mill men have needed to do for a long time.

No war, no fight, nor even a game of marbles, has ever been won by sticking purely to defensive tactics. Yet in many of its important battles, the industry has maintained an almost entirely defensive attitude. Too often in the past, its spokesmen have been content merely to answer charges hurled against it, rather than launch a counter attack and hurl a few charges of their own.

It is a matter of record that in a number of past conventions, speakers have filed past in defensive formation, each presenting evidence in rebuttal, but making no move to carry the fight back to those who started it.

Right now the industry has a three-cornered fight on its hands. It is being sniped at by advocates of the Ellenbogen bill, threatened by those who want to put a retroactive tax on cotton and menaced by an increasing flood of imported goods from Japan. Each of these three offers serious injury to the mills and the thousands of people who are dependent upon them for a livelihood. Aggressive action is more than justified on all three counts and offers the best hope of victory in each of them.

Advocates of the Ellenbogen measure filed a flood of charges into the record. Many of them were absurd, but they went into the record just the same because the unionists rested their case upon abuse rather than upon truth.

Mill men who appeared at the hearing did a fine job in presenting the other side of the picture. Nothing that has been said here should be taken to mean otherwise. They showed more fight and got better results by showing it than is usually the case.

We can't help but believe, however, that the evidence in the case would have been materially strengthened had the mill spokesmen put into the record, the record of the union itself. Hundreds of people in the South were eye-witnesses to the tactics that the United Textile Workers used in the 1934 strike. They saw for themselves how violence and intimidation rode with the flying squadrons. They saw people who wished to continue at work, forced from their chosen places of employment. They saw in the end the collapse of the strike because the wings of the flying squadrons were clipped and people who wished to work were again free to exercise that right. They saw how a small and misled minority could temporarily force their wishes upon the vast majority of the mill employees who had no desire to strike.

When the 1934 strike appeared imminent, we urged the mills to take photographs wherever attempts were made to force employees from the mills.

Just after the strike, we expressed the hope that a complete record of such cases, backed by affidavits of eye-witnesses, be compiled.

Had both the written and photographic evidence been available at the Ellenbogen bill hearing, they would have proved a very effective counter thrust at the numerous charges hurled by union spokesmen.

The textile industry has been too long on the defensive and evidence that it is now prepared to wield a heavier cudgel in its own behalf is distinctly cheering.

"Write Your Congressmen"

ALL of us are very frequently subjected to the admonition, "Write your Senators and Congressmen." This is often very timely and effective advice. Unfortunately many of us do not do a particularly good job when we take pen in hand to address our duly elected representatives.

We were talking with a mill manager the other day who offered some rather timely advice on the subject of this letter writing. In his own State, for some years past, each legislature has had its share of adverse legislation offered for adoption. And the mill men have regularly and religiously written to their representatives. In one recent instance, when the letter writing did

not seem to be getting results, a group of mill men arranged to meet with a group of legislators to talk things over.

The legislators, it seemed, were perfectly willing to be reasonable and fair and to hear both sides of the question. They did point out, however, one very glaring error that the mill men were guilty of. In effect they said: "We are always glad to get your letters and telegrams, and to consider your side of the case. The trouble is, you don't take time to give us enough evidence to support your views. You don't give us enough ammunition to fight with. The other side of the picture is this: When your opponents write to us, they really go into a detailed argument in support of their position and they back it up with personal visits and further argument."

These legislators went on to say that no one realized how much pressure was being put on them by various groups seeking new forms of legislation. They stressed the fact that these minority groups are well organized and well armed when they seek it.

The lesson in this seems to be a warning that when you do "write your Congressmen," don't stop with anything short of telling him the whole story.

An Alternative Tax

(New York Times)

Members of the cotton textile industry, acting through a joint meeting of three of their national associations, have petitioned Congress not to impose any retroactive excise levy to recapture impounded processing taxes, and have urged it to finance any substitute farm relief legislation not out of a processing tax, but out of a manufacturers' sales tax. Without denying the need for farm relief, they contend that remedial measures should be financed like other national policies on the broadest possible tax basis rather than by levies on a particular class or industry.

This plea, no doubt, is motivated by self-interest, but there are substantial justice and good sense behind it. Apart from any question of constitutionality, the processing tax was a bad tax economically from the very beginning. It was adopted, apparently, in the belief that under it the agricultural program would be "paying its own way," and that therefore no burden would be put on the Treasury. But this belief was the product of muddled thinking. Money is paid by the Federal Government not so much out of the Treasury as through it. The ultimate burden in any case is not on "the Treasury" as such, but on the taxpayer. The processing tax, except to a small extent, was obviously not paid by agri-

culture itself; if it had been there would have been no point in imposing it: the farmers could not improve their position by paying their own subsidy. The processing tax, like most other taxes, fell ultimately on the consumer, though no doubt part of it fell on the processor and part of it backed up on the farmer himself.

For the most part, the attempt to pay certain governmental expenditures out of special segregated or earmarked taxes is deceptive. It is better in general to make expenditures on their merits and to regard the needed revenues as a total sum to be raised in whatever manner is most equitable and least burdensome in its incidence. Judged by this standard, the processing taxes were especially bad. In effect they were sales taxes in the neighborhood of 30 per cent on some of the foremost necessities of life. They put an unfair handicap on the cotton textile industry and increased its burdens as compared with other industries. A manufacturers' sales tax may not be the ideal tax for a substitute farm relief program if such a tax is to be imposed, but as compared with the processing taxes its greater desirability cannot be doubted.

Fisher Hits Wallace

IN commenting upon the fact that the mills are refunding to their customers the money they have received from impounded processing taxes, Russel T. Fisher, secretary of the National Association of Cotton Manufacturers, takes occasion to pay his respects to Secretary Wallace. Mr. Fisher says:

Henry A. Wallace, Secretary of Agriculture, in a recent radio address, described the return of the taxes to the mills as a "legalized steal." He clearly implied that refund of the taxes constituted a gratuity or outright gift to the mills. That his address was in complete disagreement with fact apparently troubled the Secretary of Agriculture not one whit, for he has not seen fit to correct the utterly false impression created by his address.

The refunded tax money is going back to the mills' customers under terms of agreements that have been in effect for several months. As a Government official, Secretary Wallace should keep himself informed on matters of common knowledge.

Big Year in Hosiery

LAST year proved one of exceptional business activity for the hosiery mills. Total shipments of all kinds of hosiery were larger than in any year since 1929, it is shown in figures compiled by the National Association of Hosiery Manufacturers.

One significant feature in the Association's report is that the mills employed 15,000 persons more than in any code year.



THERE'S SAFETY IN NUMBERS

Whether the Need be Physical or Mental

The advantages of qualified man power for physical accomplishment on a large scale are axiomatic. The advantages of qualified brain power, or COLLECTIVE THINKING, for mental accomplishment in the business world are not so widely recognized.

The need for COLLECTIVE THINKING in textile processing was never before so great as today. Chemical research and the ever changing demands of fickle Dame Fashion have multiplied a thousandfold the problems of textile processing executives. Furthermore they have less time than ever before in which to solve these problems.

COLLECTIVE THINKING of the proper type is not available to most processing executives within the organization, because the average mill or finishing plant can not afford a STAFF of textile processing specialists. What more natural then than that they should utilize A-H Consultation Service, since it costs them nothing?

This service is rendered by a staff of specially trained chemists, assisted by a completely equipped modern laboratory and a company experience of 121 years. Use it to check on the efficiency of routine sizing and finishing operations, as well as on new processing problems.



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Mill News Items

CHARLOTTE, N. C.—Johnston Mills will soon let contract for an addition to their plant, and will install a quantity of additional equipment.

FRANKLINVILLE, N. C.—The Randolph Mills has appointed Iselin-Jefferson Company as sole selling agents for their products. The mills produce flannels and diaper cloths.

CONCORD, N. C.—The Concord Silk Throwing Company has been incorporated by A. R. Hoover, A. R. Howard and H. M. Grey, all of this place. Mr. Howard is president of the Concord Knitting Company, Mr. Grey is treasurer of the same company and Mr. Hoover is superintendent of the Hoover Hosiery Mills.

GAFFNEY, S. C.—Maj. Henry C. Moore is to receive \$8,500, the full amount he asked, in payment for his services as receiver for the Irene Mills July 1, 1933, until the end of the receivership last fall, a court order filed, revealed. The order, signed by Circuit Judge Henry Johnson, overruled a report by Donald Huggins, special referee, recommending that the receiver be paid only \$4,500.

HICKORY, N. C.—Four large textile mills of the Shuford Mills group, with headquarters in Hickory, have coted to sign the cotton textile industry pledge, sponsored by the Cotton-Textile Institute to preserve NRA standards, it was announced at the conclusion of their annual stockholders' meetings here this week.

The pledge covers the matters of minimum wages, maximum hours of work, maximum machine hours and employment of persons under 16 years of age.

The four firms are the A. A. Shuford Mills Company, the Highland Cordage Company, one of the largest of its kind in the world, the Granite Falls Manufacturing Company, at Granite Falls, and the Granite Cordage Company, also located at Granite Falls.

SALISBURY, N. C.—A two-day hearing in which the plaintiff, Cannon Mills, Inc., presented its evidence was completed here in the litigation against Klumac Cotton Mills of this city. Hubert E. Olive of Lexington was the referee.

Principal witnesses for the plaintiff, who is suing Klumac for \$50,000 unpaid balance on a note and for about \$162,000 balance an open account, included Charles A. Cannon of Kannapolis, Hearne Swink and Fred A. Williams.

Mr. Cannon is chairman of the board of Cannon Mills, Inc., New York selling agency; Swink is secretary of Cannon Mills Company of Kannapolis and Williams is president of the selling agency.

Klumac filed a counter suit against the selling agency, alleging damages of \$687,500 for a breach of contract and some \$175,000 alleged recoverable for usury. Klumac, through its secretary-treasurer and principal stockholder, W. F. McCanless, at a previous hearing testified that the selling house ran the Klumac plant for six months in 1934, violated its contract and charged an unlawful rate of interest both on the note and open account.

Attorneys for both sides will file briefs later with the referee.

Mill News Items

MARION, N. C.—J. R. Bradham, general manager of the Lake City Hosiery Mill here, said that the production of his plant has recently been increased that the company expects to add a full night force of employees within the next week.

Mr. Bradham recently assumed the management of the company and has since worked out a number of new and attractive designs for sport hose, such as golf hose and men's half hose, which have been well received on the market and which has brought about the increased production. The addition of the extra shift is expected to give employment to about 25 persons.

ICARD, N. C.—Stockholders of the Icard Cordage Company, which has been operating under a receivership since early November, when the secretary-treasurer, S. S. Short, resigned, met in the office of the company, to discuss the company's affairs and make plans for the future of the plant. The stockholders present, representing all but a very few shares, agreed to surrender all stock interests to the three largest creditors, C. A. Spencer of Morganton, John Yancey and J. L. Morgan of Marion, upon condition that all outstanding indebtedness be either assumed or met. The audit of the company's affairs has not yet been completed, B. B. Blackwelder of Hickory, N. C., who has been acting as receiver, stated. For the present the plant is operating, having unfilled orders on hands, and it is hoped that ways and means will be found to continue its operation.

HIGH POINT, N. C.—Purchase of the Hillcrest Silk Mill from Marshall Field & Co. by a group of High Point business men was announced Monday, and operation of the plant will start at once under the new ownership. The transaction was completed with Luther H. Hodges of Leaksville, general manager of the Marshall Field Mills. Purchasers are R. B. Terry, Earl N. Phillips, J. P. Rawley and H. A. Knight.

Sale of the mill was an outright cash transaction, but the amount involved was not revealed. By the deal the local men acquire the mill, which furnishes employment for 300 persons, six acres of land and 300 looms and accessory equipment for the production of pure silk and rayon and rayon goods. The plant had been closed for about a month as a result of a change of merchandising policy by the Marshall Field Company.

Riverside Profit Put At \$188,942

The narrow margin of profit in the textile field under accentuated conditions of competition is reflected in the annual statement on the financial status of the Riverside & Dan River Cotton Mills, Danville, Va.

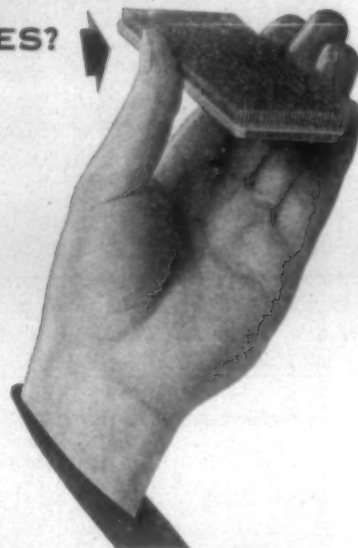
The statement reflected an improved position for the mills, with current assets shown to be \$8,799,984.60 and total current liabilities \$2,582,820.

PAID \$449,400 DIVIDENDS

The profit from goods sold during the year was \$222,467.07 and the total cost of the goods sold \$19,237,712.07, throwing into sharp relief the meager profits even on as large a volume of annual business.

"Other income" of \$11,475 brought the total profit for the year up to \$233,942.07, but after deducting the reserve for Federal and State income taxes, totalling \$45,-

HOW WOULD YOU GRIND THESE WIRE TEETH ON THE SIDES?



Surface grinding of card clothing is no novelty to you. It is done in your own mill many times during the year. But have you ever wondered how the wire in cotton card fillets is ground ON THE SIDES by the manufacturer? Possibly you didn't even know that this is standard practice—at least with Ashworth.

Consider the fact that in the average cotton card clothing there are about 79,200 points to the square foot. Consider also that each tooth is scarcely bigger than a tooth brush bristle. Then you have some idea of the difficulty of side grinding these teeth in an accurate, practical way.

The fact that an Ashworth DID solve this problem in a very efficient manner years ago is one of the many ways in which this business has blazed a trail of progress in the textile industry.

This Ashworth invention is known as plow grinding. There are other methods of side grinding in general use today and plow grinding in one form or another may be practiced by other manufacturers, but this company still has its own improved, highly efficient method.

This operation makes each wire considerably thinner at the top than at the base. Thus the fibre slides off more easily and less stripping is required. This in turn increases the life of the clothing.

NOTE: Other Ashworth contributions to card clothing progress will be described in future advertisements.

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Southwestern Representative: Textile Supply Co., Dallas, Tex.

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000, a net profit of \$188,942.07 is shown. The surplus as of December 31, 1935, is shown to be \$7,158,520.20 after deducting dividends declared and paid in 1935 totalling \$449,400.

In the current assets are listed \$201,039 in cash, with \$2,955,117.48 in accounts and notes receivable, while the inventories valued at the lower of cost or market are given as \$5,643,767.85. The fixed assets consisting of plant machinery, power house, houses and tenements are given a worth of \$33,932,949.73, but against this total is a deduction of reserves for depreciation shown to be \$18,162,892.10.

The current liabilities amount to \$2,500,000 in notes payable and \$82,820 in accounts payable and reserves for State and Federal taxation.

Dividends in arrears on the 6 per cent cumulative preferred stock amount to \$18 per share plus interest. The annual stockholders' meeting will be held on February 20th.

The detailed financial statement follows:

ASSETS	
Current assets:	
Cash	\$ 201,069
Accounts and notes receivable and cash in escrow, less reserves	2,955,177
Inventories—valued at the lower of cost or market	5,643,767
Total current assets	\$ 8,799,984
Investments at cost less reserves	90,042
Fixed assets:	
Land, buildings, machinery, equipment, water power development, electric plants and equipments, fire protection and filter plant, houses, tenements, trucks, etc.	\$33,932,949
Less reserve for depreciation	18,162,892
	15,770,057
Prepaid charges	81,255
Total	\$24,741,340
LIABILITIES	
Current liabilities:	
Notes payable	\$ 2,500,000
Accounts payable and reserves for Federal, State and capital stock taxes	82,820
Total current liabilities	\$ 2,582,820
Capital and surplus:	
Capital authorized and issued:	
75,000 shares 6% cumulative preferred:	
Par value of \$100 each	\$ 7,500,000
300 shares common:	
Par value of \$25 each	7,500,000
Total	\$15,000,000
Surplus earned	7,158,520
	22,158,520
Total	\$24,741,340

NOTES

The foregoing balance sheet and profit and loss and surplus accounts give effect to the accounting necessi-

tated by the invalidation of the Agricultural Adjustment Act by the Supreme Court on January 6, 1936, and supplementary decision of January 13, 1936. No consideration has been given in these statements to reflect any contingent assets or liability on account of processing taxes paid to the Collector of Internal Revenue.

Dividends in arrears on the 6 per cent cumulative preferred stock amount to \$10 per share plus interest.

For the convenience of the manufacturing department the inventory was taken as of Saturday, January 4, 1936, hence the operations, except financial, cover a fifty-three-week period.

The statement of income, profit and loss, and surplus account follows:

Income from sales, rents, etc.	\$19,878,960
Less discounts and allowances	418,781
Net income	\$19,460,179
Cost of manufacturing:	
Raw material, labor, expenses and supplies, etc.	17,890,739
Depreciation	1,155,899
Add decrease in stock in process and finished goods on hand	191,073
Total cost of goods sold	\$19,237,712
Profit from goods sold	222,467
Other income	11,475
Profit for year, subject to Federal and State income taxes	\$ 238,942
Reserve for Federal and State income taxes	45,000
Net profit for year	\$ 188,942
Surplus:	
Balance January 1, 1935	7,195,317
Add unused reserves credited to surplus	223,660
Less dividends declared and paid in 1935	449,400
Surplus Dec. 31, 1935	\$ 7,158,520

New Textile Text Books

The latest development in the plans of the Textile Foundation, in co-operation with the deans of the textile schools to raise the standards of the latter, involves the preparation of new and up-to-date text books on wool and cotton manufacturing, and textile economics. Several conferences on the subject have been held recently, and F. M. Feiker is acting for the Foundation in correlating the work.

The basic material for a text book on cotton carding has been collected and is being prepared for publication by H. H. Willis of Clemson College, S. C., in co-operation with the deans of other schools. The preparation of text material on the following cotton subjects has been authorized: Cotton classification; opening and picking; drawing and roving; combing; spinning. It is expected that some of the cotton text books will be ready for the next Fall term.

The selection of subjects for one or two text books on wool manufacturing has been assigned to Charles H. Eames of Lowell Textile Institute and W. D. Fales of the Rhode Island School of Design. Another project involves the compilation of a text book on textile economics, or economics as specifically related to textile buying, manufacturing, merchandising and financing.

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Cotton Goods Markets

New York.—Sales of cotton goods were only moderately active last week. Buyers were generally unwilling to cover more than their nearby needs. They lack confidence because of the threat of new taxes and until the situation is further clarified seem inclined to place orders only for their most pressing needs. Prices on most constructions were firmly held.

Further progress in mill refunds of taxes to their customers was reported during the week and the market opinion is to the effect that business will improve as the refunds are put through. The adoption of the uniform rate of 2 per cent for the procurement of tax relief, announced by several large selling agents, is expected to be generally used in the market. It was favorably received and was a lower rate than had generally been expected.

The position of the print cloth market, it is reported, is stronger than might be supposed. At the beginning of the year, following the very active last quarter trading, mills still had a backlog on 30-inch and wider print cloths which was equal to nearly five weeks of the December production rate, against which they held a stock equal to about four weeks of December production. Since that time, the sales have run below production, but the accumulations of stocks have not been as great as might have been expected, because there have been moderate reductions in the rate of production during January.

The 80x60s broadcloths were moderately active all week at 6½ cents; the 100x60s sold at 8¼ cents February one-eighth March, and even money April. The latter was one of the exceptions to the general tendency of buyers to avoid forward commitments.

There was active buying of some types of fancies, and buyers were seeking earlier deliveries than could conveniently be arranged. On some cloths where old contracts were running out and original buyers were not repeating, mills found it possible to make the looms available for other buyers, and occasionally they were willing to put in short run contracts on a 20 per cent weekly basis where prices were sufficiently attractive.

Print cloths, 27-in., 64x60s	4
Print cloths, 28-in., 64x60s	4½
Gray goods, 38½-in., 64x60s	5½
Gray goods, 39-in., 80x80s	7½
Brown sheetings, 3-yard	8½
Gray goods, 39-in., 68x72s	6½
Brown sheetings, standard	8
Tickings, 8-ounce	19
Denims	14
Brown sheetings, 4-yard, 56x60s	7½
Dress gingham	16½
Staple gingham	9¼

J. P. STEVENS & CO., INC.

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40-46 LEONARD ST., NEW YORK

Cotton Yarn Markets

Philadelphia, Pa.—There was only a limited amount of business in cotton yarns last week. Buyers were reluctant to cover in view of the possibility of a new tax on cotton and many spinners were not anxious to sell under existing conditions. In the meantime, it is apparent that the unsatisfied demand for yarn is growing stronger and that once the market is freer of outside influences, business should become much more active.

Another unfavorable factor has been the uncertain situation in the cotton markets. It is being predicted here that generally higher yarn prices will develop in the spring months provided there is no severe drop in cotton prices.

The stock situation is generally favorable and mill inventories have not piled up during the slack trading of the past several weeks. It is generally admitted that stocks are lower than a year ago and in some constructions, an actual shortage has developed.

Combed yarn at present, apparently, is more active than the carded. Later this month there probably will be a greater demand for yarn, resulting from heavyweight underwear openings. Yarn buying has been held back for this event. However, yarn deliveries remain satisfactory and there have been thus far very few requests from customers for delay in shipments of yarn. Yarn suppliers look for very good business at about the present price ranges to start with.

In the last few days, leading suppliers of combed peeler yarns have felt justified in advancing their quotations. It is believed locally by yarn distributors that this will be followed soon by a similar advance in rates asked for standard white all-cotton, double carded yarns. In fact, some sellers report that already they have obtained better prices for wanted deliveries of their spinnings than were possible a week ago.

Consumers still receiving carded yarn on old contracts are having such yarns billed in to them less the conversion factor of 4.70c. This price irregularity is productive of confusion as well as a degree of exasperation. Spinners for their part see no reason in the price of cotton, or in the supplies available, to lower their prices to a theoretical basis and want their yarn rates high enough to offset further risks incident in the adjustment muddle.

Southern Single Skeins			Duck Yarns, 3, 4 and 5-Ply		
8s	24	-24½	8s	25	-25½
10s	24	-25	10s	25½	-26
12s	24½	-25½	12s	26½	-27
14s	25	-26	16s	27½	-28
20s	27	-28	20s	28½	-29
26s	30	-31			
30s	32	-33	Carpet Yarns		
36s	37	-	Tinged carpets, 8s, 3	24½	-25½
40s	39	-	and 4-ply	25½	-26½
Southern Single Warps			Colored stripe, 8s, 3	26	-27
10s	24	-25	and 4-ply	29	-
12s	24½	-25½	White carpets, 8s, 3	29	-
14s	25	-26	and 4-ply	29	-
16s	26	-27	Part Waste Insulating Yarns		
20s	27	-28	8s, 1-ply	24½	-25
26s	30	-31	8s, 2, 3 and 4-ply	24½	-25
30s	32	-33	10s, 2, 3 and 4-ply	27½	-
40s	39	-	12s, 2-ply	28	-
Southern Two-Ply Chain Warps			16s, 2-ply	29	-
8s	24½	-25	30s, 2-ply	31	-31½
10s	25	-25½	Southern Frame Cones		
12s	25½	-26	8s	24½	-25
16s	26½	-27	10s	25	-25½
20s	27	-28	12s	25½	-26
24s	29	-30	14s	26	-26½
26s	30	-31	16s	26½	-27
30s	32	-33	18s	27	-28
36s	35	-36	20s	28	-28½
40s	39	-	22s	28½	-29
Southern Two-Ply Skeins			24s	29	-
8s	24½	-25	26s	29½	-
10s	25	-25½	28s	31	-
12s	25½	-26	30s	32	-
14s	26	-26½	40s	37	-
24s	29	-30			

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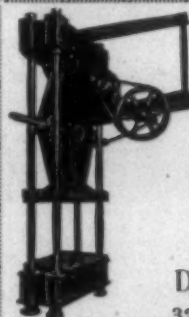
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—	—	Whitin Machine Works	—
Jackson Lumber Co.	—	Whitinsville Spinning Ring Co.	27
Jacobs, E. H. Mfg. Co., Inc.	—	Williams, I. B. & Sons	—
Johnson, Chas. B.	—	Wolf, Jacques & Co.	28

Inset New Clause In Army Contracts

Philadelphia, Pa. — Prospective bidders on materials at the Army Quartermaster Depot here have been informed of the following addition to the "Federal tax" clause appearing

in the invitations for bids: "The prices herein do not include any Federal taxes from which exemption is granted by the provisions of Section 401 (a) of the Revenue Act of 1935, approved August 30, 1935; nor any tax imposed by a State, county or municipality upon the transaction of this procurement of these materials."

Knitting Machine Attachments Upheld

The validity of knitting machine attachments to machines manufactured and sold by the Textile Machine Works is upheld in a decision rendered by Federal Judge Lindley, which was filed in the U. S. District Court.

The decision holds that the claims of the patent involved in a suit against Louis Hirsch Textile Machines, Inc., were infringed and directs the entry of a decree for the plaintiff adjudging the patent, which bears the serial number 1,713,628, valid and infringed, and orders a reference to a special master to assess damages.

The infringement suit was instituted in October, 1931, and was tried before Judge Lindley last October. In a 21-page opinion devoted largely to a technical discussion of the patent in suit, prior patents alleged to nullify the patent claims, and the practical use of the machines, Judge Lindley concludes that the claims in the patent in suit known as the Schletter patent involve invention.

Judge Lindley voiced the opinion that Schletter provided for full-fashioned hosiery machines, for the first time, a single, efficient attachment for accomplishing a wide variety of work never before accomplished by a single device.

Testimony offered by the plaintiff stressed the fact that the Schletter attachment is recognized as a valuable contribution to the industry, that the attachments are in general use in this country and that the patent has been commercially successful.

The defendant acted as selling agent for knitting machines of German manufacture under German patents but the attachments alleged to infringe were made in this country. The defense rested on the contention that the Schletter patent is invalid and the claim that the defendant had not infringed.

Howson & Howson represented the plaintiff in the litigation and Darby & Darby appeared for the defendant.

Brazil Cotton Output Shows Marked Gain

The Brazilian Department of Agriculture has issued a statement estimating its cotton crop for 1935 as totalling 370,500,000 kilos compared with 279,700,000 kilos in 1934 and 147,636,000 in 1933.

In the estimates, the State of Parana and Sergipe are shown as likely

to have a smaller crop than last year; most of the other States, however, will show a large increase in production.

For some time the Federal Foreign Trade Council has been studying the matter of financing the present crop of cotton. Last year a good part of this was taken care of by the ginners, but that method apparently is not to be followed this year. It was pointed out in the beginning that the time was too short and the need too great to permit the matter to be taken up through the usual formal channels, but it seemed evident that the President of the Republic had sufficient emergency powers to meet the situation. It was proposed, and this was finally agreed, that the matter could be handled through the Rediscount Bureau of the Bank of Brazil, which could discount the cotton growers' paper. Seemingly the bureau can advance at least 100,000 contos under its existing powers. Steps are now being taken to carry out this proposal.

The volume of cotton exported during the first eight months of this year as compared with 1934 was 95,000 tons and 63,000 tons, respectively, and the value of these exportations jumped from 211,000 contos in

1934 to 461,000 tons in 1935 so any subject touching on cotton is a vital one today.

Southeastern Mills Issue Tax Credits Less 2%

Southeastern Cottons, Inc., issued the following statement:

"The following mills manufacturing gray goods selling through Southeastern Cottons, Inc., approve the issuance of credits and adjustments on contracts sold with the processing tax clause covering respective periods of 30, 90 and 120 days, adopted August 6, 1935, with a uniform deduction of 2 per cent as the cost of procuring tax relief:

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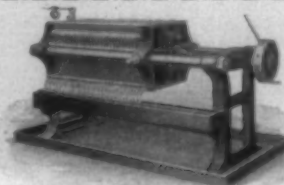
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Reports On Textile Research

Valuable new basic knowledge as to the elastic and plastic properties of textile fibres should result from the studies now being conducted by Dr. R. L. Steinberger, a Textile Foundation Fellow, who reports in the February *Textile Research* on "Creep in Cellulose Acetate Filaments." The elongation of these single filaments under a constant stress of 2 grams, and at relative humidity values from 0 to 100 per cent, continues indefinitely, but at a rapidly decreasing rate until rupture. This is the antithesis of what similar tests of single mature cotton fibres should show.

Other researches described in the same issue are "Degradation of Weighted Silk Fibroin by Acid and Alkali," by Ross, Johnson and Edgar of the Iowa Agricultural Experiment Station, and "Rapid Microscopical Measurement of Diameters in Cross-section," by Fred A. Mennerich of the United States Testing Company.

NEW PHASE OF WARP SIZING RESEARCH

Research on the sizing of warps of synthetic yarns, and on the glues, gelatines and other materials used for such processing, is to be the second phase of the study of warp sizing that has been in progress at Massachusetts Institute of Technology under the auspices of U. S. Institute for Textile Research, Inc., since last summer. It will be entered upon, according to the February issue of *Textile Research*, just as soon as the basic study of starches, which was the initial part of this research, is completed. Unlike the latter, and prior to experimental sizing of cottons with starches in the mill, the study of synthetic yarn sizing will start with experimental work under controlled mill conditions. Standards for materials and processing will be set up from the yarn to the finished product. Not only will data be accumulated showing properties of materials before and after every process, but break-down weaving tests will be conducted on a variety of warps sized in different ways. The data resulting from this experimental work is expected to define the needed fundamental knowledge that is lacking, and that must be the subject of coincident or future laboratory research.

Dr. J. R. Katz, who has been the director of the study on starches, is completing the reports on this phase of the research, and will thereafter be engaged with future work only on a consulting or advisory basis. He is succeeded as director by W. E. Yelland, who has been his assistant thus far, and the latter will have the services of several laboratory specialists.

Industrial Rayon Expansion

Cleveland.—The Builders Exchange in its daily building bulletin to members reports that the Industrial Rayon Corporation will spend about 2 dollars for the structural phases of its plant to expand its local plant, as noted. The plans are drawn awaiting orders from the management, the builders' group states. Christian, Schwarzenberg & Gaede Co. are listed as the architects and engineers.

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